# JOURNAL OF
# The Royal Astronomical Society of Canada

devoted to the advancement of astronomy
and allied sciences

# JOURNAL DE
# La Société Royale d'Astronomie du Canada

dédié au progrès de l'astronomie et des
sciences connexes

*Editor* Alan H. Batten
*Assistant to the Editor* Marie Fidler

Volume 79, 1985

Printed by the University of Toronto Press
ISSN 0035 872X

# CONTENTS FOR VOLUME 79, 1985

## I. FEBRUARY


UBV Photographic Photometry of Ruprecht 36 — *B. Cameron Reed* — 1

Sommaire de 25 années d'observations visant a détecter des êtres intelligents extraterrestres — *J.P. Vallée* — 9

About Our Authors/Nos Auteurs — *Marie Fidler* — 22

Education Notes/Rubrique Pédagogique (N.F.B. Astronomy Films: *Roy L. Bishop*) — 23

Notes (Two More Minor Planets Named for Canadian Astronomers: *Ian Halliday*; Seventy-Five Years Ago) — 26

Review of Publications/Critiques d'Ouvrages (*Cecilia Payne-Gaposchkin* (*An Autobiography and other recollections*) edited by Katherine Haramundanis: *William Rowan Hamilton. Portrait of a Prodigy* by Sean O'Donnell; *Cosmic Discovery: The Search, Scope and Heritage of Astronomy* by Martin Harwit; *International Halley Watch Amateur Observers' Manual for Scientific Comet Studies* by Stephen J. Edberg; *Maxwell on Saturn's Rings* edited by Stephen G. Brush, C.W.F. Everitt and Elizabeth Garber; *Surveys of the Southern Galaxy* edited by W.B. Burton and F.P. Israel; *By Jupiter: Odysseys to a Giant* by Eric Burgess; *The Cambridge Photographic Atlas of the Planets* by Geoffrey A. Briggs and Fredrick W. Taylor; *The Universe* by Edward Parker, *Night of the Comet* by Allen Sharp, *The Way of the Stars* by Ghislaine Vautier and *The Shining Stars* by G. Vautier and Kenneth McLeish; *Design and Origins in Astronomy* edited by George Mulfinger, Jr.) — 29

List of Publications Received for Review/Titres Reçus — 46


## II. APRIL


Preliminary Orbital Elements for the Am Binary HD 434 — *Douglas P. Hube* and *Austin F. Gulliver* — 49

Halley's Comet: A Bibliography of Canadian Newspaper Sources 1835–36 and 1910 — *Julian A. Smith* — 54

About Our Authors/Nos Auteurs — *Marie Fidler* — 100

Notes (Seventy-Five Years Ago) — 101

Education Notes/Rubrique Pédagogique (Un Planétarium à l'Institut de Marine du CÉGEP de Rimouski: *Damien Lemay*) — 102

Review of Publications/Critiques d'Ouvrages (*Planetary Nebulae: A Study of Late Stages of Stellar Evolution* (Astrophysics and Space Science Library, Vol. 107) by Stuart R. Pottash) — 107


## III. JUNE


Professor H.L. Welsh, 1910–1984 — *Donald A. MacRae* — 109

A Note on Two RS Canum Venaticorum Stars: LX Persei and SZ Piscium — *John R. Percy* — 113

The Quadruple System HR 3337 — *Gustav A. Bakos* — 119

Contributions of W.B. Jack and W.F. King to the Standardization of Early Surveying Instruments — *J.E. Kennedy* — 130

Astronomy with the Hubble Space Telescope — *Sidney van den Bergh* — 134

About Our Authors/Nos Auteurs — *Marie Fidler* — 143

Education Notes/Rubrique Pédagogique (A Senior High-School Course in Astronomy: *Peter R. Ryback*) — 144

Notes (Seventy-Five Years Ago) — 146

Review of Publications/Critiques d'Ouvrages (*Astronomical Techniques* by C.R. Kitchin; *L'astronomie et son histoire* par Jean-René Roy; *The Cambridge Deep-Sky Album* by Jack Newton and Philip Teece; *A Catalogue of the Riche-Covington Collection* compiled by Barbara de St. Remy, revised, enlarged and edited by Leslie H. Morley) 147

IV. AUGUST

The Age of the Universe — *Sidney van den Bergh* 153
God and the Big Bang — *Lorna Green* 160
Radial-Velocity Observations of Two Visual Binaries — *Allan H. Batten, Wenxian Lu* and *C.D. Scarfe* 167
A Newly-Discovered Open Cluster Surrounding the 68½-Day Cepheid S. Vulpeculae — *David G. Turner* 175
On the Velocity Variability of 5 Serpentis and o Aquilae — *C.D. Scarfe* 180
About Our Authors/Nos Auteurs — *Marie Fidler* 182
Education Notes/Rubrique Pédagogique (Simulating an Eclipsing Binary Light Curve (A Microcomputer Program for the Introductory Astronomy Course): *David L. DuPuy* and *Robert D. Ellis*) 183
Notes (Another "Canadian" Minor Planet; Seventy-Five Years Ago) 188
Review of Publications/Critiques d'Ouvrages (*A Hundred Billion Stars* by Mario Rigutti (translated by Mirella Giacconi); *Double Stars, Physical Properties and Generic Relations* (Proceedings of IAU Colloquium No. 80) edited by B. Hidayat, Z. Kopal and J. Rahe (Reprinted from *Astrophysics and Space Science*, Vol. 99, Nos. 1 and 2); *Encyclopedia of Antique Scientific Instruments* by John FitzMaurice Mills) 189
List of Publications Received for Review/Titres Reçus 194

V. OCTOBER

The Grande Prairie Fireball of 1984 February 22 — *Ian Halliday* 197
Observing Comet Halley from the South — *Michael S.F. Watson* 215
About Our Authors/Nos Auteurs — *Marie Fidler* 227
Sixteenth Meeting of the Canadian Astronomical Society held in Toronto, May 27–31, 1985 228
Annual Meeting of the R.A.S.C. (List of Officers and Council for 1985; Minutes of the Annual Meeting: *Leo Enright*; New Honorary Member: *Stephen Hawking*; New Service Award: *Cam Fahrner*) 248
Notes (Seventy-Five Years Ago) 256
Education Notes/Rubrique Pédagogique (Astronomy in Canadian Schools: A National Perspective: *Menahem Finegold* and *Heidi Kass*; A New N.F.B. Astronomy Film: *Roy L. Bishop*) 257
Review of Publications/Critiques d'Ouvrages (*The MK Process and Stellar Classification* edited by Robert F. Garrison; *The History of Astronomy from Herschel to Hertzsprung* by Dieter B. Herrmann, trans. and rev. by Kevin Krisciunas; *A Field Guide to the Stars and Planets*, second edition, by Donald H. Menzel and Jay M. Pasachoff; *Astronomy with Schmidt-Type Telescopes* edited by M. Capaccioli; *Comets: A Descriptive Catalogue* by Gary W. Kronk; *Glossary of Astronomy and Astrophysics*, second edition, revised and enlarged, by Jeanne Hopkins; *Interferometry*, second edition, by W.H. Steel)

VI. DECEMBER

The Carbon and Related Stars — *Robert D. McClure* 277
An Iterative Solution for Stellar Space Densities — *B. Cameron Reed* 294
The Oblique Doppler Effect — *Jeremy B. Tatum* 302
About Our Authors/Nos Auteurs — *Marie Fidler* 312

Notes (Draft of Instructions to the Officers Acting as Principal Astronomers in the British Commission for Defining the Boundary Line in North America under the Treaty of Washington: *J.E. Kennedy*; Halley's Comet 1985; Seventy-Five Years Ago) 313
Education Notes/Rubrique Pédagogique (How to Make the Best of a Poster Presentation: *Robert F. Garrison, Judith A. Irwin* and *J.R. Percy*) 317
Review of Publications/Critiques d'Ouvrages (*Rings: Discoveries from Galileo to Voyager* by James Elliot and Richard Kerr; *L'Observatoire de Paris – Son histoire: 1667–1963*, Observatoire de Paris: *The Catastrophic Universe: an Essay in the Philosophy of Cosmology* by A.G. Pacholczyk; *Methods in Radiative Transfer* edited by W. Kalkofen; *Activity in Red-Dwarf Stars* edited by P.B. Byrne and M. Rodonò; *Observational Tests of the Stellar Evolution Theory* (I.A.U. Symposium No. 105) edited by André Maeder and Alvio Renzini) 320
List of Publications Received for Review/Titres Reçus 330
Index to Volume 79, 1985 331
Contents for Volume 79, 1985 i